

Height Gauges





Made To Measure in the Course of the Manufacturing Process

Height gauges are single-axis handtools made to measure on a surface plate, preferably in granite. The TESA-µHITE version being offered to you in this section clearly shows that combining a surface plate with any height gauge can create a whole measuring system.

Providing the needed versatility, they are well suited for dimensional inspection directly on a machine or a group of machines, usually during the various setting and sampling operations throughout the whole manufacturing process. They are specially made for checking parts that are difficult to machine due to their critical sizes.

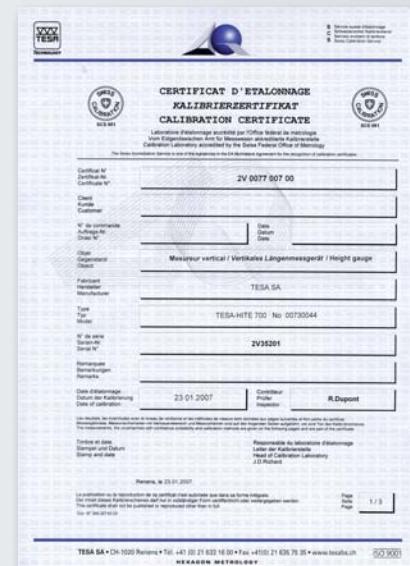
TESA-HITE or TESA MICRO-HITE, whether manually operated or motor-driven, do not require any special skills. Nearly everyone working in the workshop can use them easily.

SCS Calibration Certificate

The newly implemented TESA-HITE and TESA MICRO-HITE production line now also includes its own temperature-controlled laboratory recently certified by the Swiss Accreditation Service, so that each height gauge comes with a SCS calibration certificate provided free of charge. The negligible temperature variation ($20^{\circ}\text{C} \pm 0,1^{\circ}$) along with the use of high-precision step gauges allow the lowest uncertainty of measurement to be achieved during the calibration process.

- As a first step, all values needed for automatic compensation for the systematic errors of the finished height gauge through Computer Aided Accuracy (CAA) are captured.
 - Once conveniently calculated, each single compensation value is then stored in the tool memory so as to allow the correction of the measured values during calibration, automatically.
 - Finally, the relevant calibration certificate is issued based on the values obtained during a new series of measurements taken at another measuring point, also equipped with step gauges.

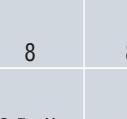
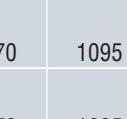
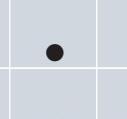
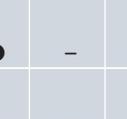
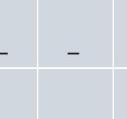
The applied calibration procedure together with the SCS based certification ensure that every TESA height gauge is traceable to national standards.



Height Measurement – One of TESA's Strengths

TESA offer the largest range of height gauges for reliable one or two-dimensional measurements. En-Users can choose the convenient model according to the requirements of their metrology applications, but also to their financial ressources. This wide range goes from the simple height and scribing gauge to the motorised vertical column suitable for high-precision measurements in two coordinate directions.



Height Gauge Models	Details on page		 μm (L in m)	 Accessory Std (mm)	 Accessory Spec. (mm)	Measuring capabilities						
						 1D	 Ø	 ⊥	 △	 2D	 3D	Motorised
 TESA-HITE Magna	N-4		8	870	1095	●	●	-	-	-	-	-
 TESA-HITE	N-7		2,5+4L	870	1095	●	●	●	-	-	-	-
 TESA -HITE plus M	N-10		2,5+3L	860	1085	●	●	●	●	●	●	●
 TESA MICRO-HITE	N-12		2+3L	1075	1300	●	●	●	●	●	-	-
 TESA MICRO-HITE plus M	N-16		2+1,5L	1075	1300	●	●	●	●	●	●	●
 TESA-µHITE	N-21		1/2	160	360	●	●	-	-	-	-	●
 TESA-µHITE + Power Panel Plus M	N-25		1/2	160	360	●	●	-	●	●	●	●
 ETALON height and scribing gauges	N-30		40	1000	-	●	-	-	-	-	-	-



TESA-HITE magna 400 and 700

Made to withstand severe workshop conditions

Emanating from a well-proven TESA technology, both TESA-HITE magna 400 and 700 are equipped with the patented TESA magna μ system. They are designed to remain unaffected even in the toughest conditions (water and oil splashing, dust particles).

They have exceptional features that make them indispensable for the workshop while also offering the most favourable price-performance relationship. Robust and dependable, their modern design provides the highest resistance for use close to the production area.

Each height gauge is battery-powered and serve to measure height or step dimensions, diameters, centre-to-centre distance of bores or grooves, width of nuts, and much more.



- Wide application range, two sizes available with measuring span to 415 mm / 16 in or 715 mm / 28 in, respectively.
- Electronics totally protected against oil and water splashing or dust particles (IP65).
- Control panel with numerical display to 0,001/0,005/0,01 mm or 0,0001/0,0002/0,001 in.
- Dynamic probing of the workpiece with a constant measuring force.
- Easiness, high reliability when checking bores or shafts using TESA's unique device for automatic detection of the culmination point – patented.
- Acoustic signal to acknowledge value capture, also conveniently programmable.
- Ability to measure parallelism errors.
- TESA's magnetic system, guaranteeing correct operating even in harsh workshop conditions – patented.
- Large LC display, also with symbols for the measuring functions.
- Zero-setting anywhere within the measuring range.
- PRESET function for entering any given value.
- Metric/inch conversion.
- RS 232 data output.
- SCS calibration certificate provided with each height gauge.

	✓
	Factory standard
	83 x 49 mm LC display. 7-digit plus minus sign. Also with graphical symbols for all active functions.
	0,001/0,005/ 0,01 mm or 0,0001/0,0002/ 0,001 in
	12 mm
	Metric/Inch conversion
	Measuring span, application range and precision: see relevant table on page N-5.
	Nickel plated gauge base (chemical coating)
	Magnetic scale
	(12 ± 1,5) x 10 ⁻⁶ K ¹
	Probing head mounted on a ball-bearing, hand wheel for head displacement, fine setting. Head drive carriage can be locked.
	500 mm/s 20 in/s
	1,5 ± 0,5 N (at switch point)
	RS 232
	Rechargeable batteries, 6V
	≈ 60 h
	10°C to 40°C
	-10°C to 60°C
	100%
	IP55 or IP65 for both electronics and measuring system (IEC 60529)
	See table on page N-5
	EN 61326, Class B (with disconnected charger)
	Shipping packaging



Identification number



Declaration of conformity



SCS calibration certificate

TESA-HITE magna 400 / 700**00730047 TESA-HITE magna 400 height gauge**

Measuring span 415 mm / 16 in

Application range 0 ÷ 570 mm / 0 ÷ 22 in

00730059 TESA-HITE magna 700 height gauge

Measuring span of 715 mm / 28 in

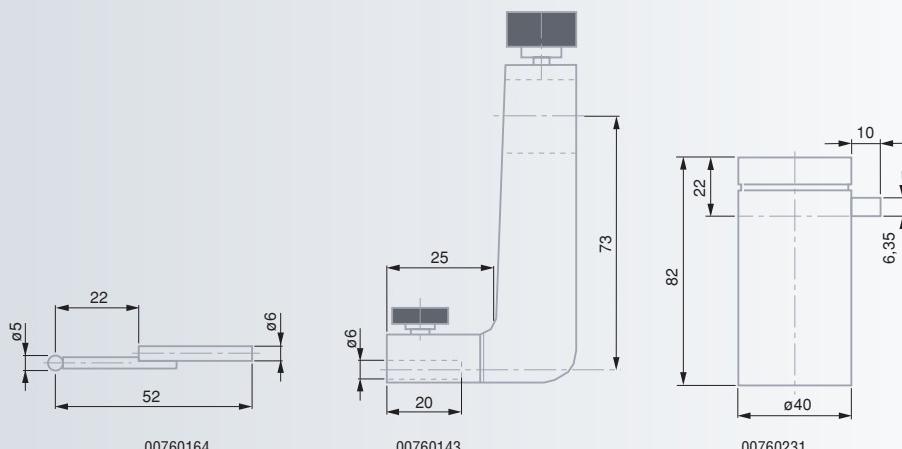
Application range of 0 ÷ 870 mm / 0 ÷ 34 in

Each height gauge is supplied with the following standard accessories:

- 00760143** 1 Standard probe insert holder
- 00760164** 1 Standard probe insert with a 5 mm dia. tungsten carbide ball tip
- 00760231** 1 Master piece for establishing the probe constant, nominal dimension to 6,350 mm / 0.250 in
- 00760157** 1 Rechargeable battery, 6V
- 04761054** 1 Mains adapter, 100 ÷ 240 Vac / 50 ÷ 60Hz
- 04761055** 1 Cable EU for mains adapter
- 04761056** 1 Cable US for mains adapter

Technical Data

		TESA-HITE magna 400	700
	mm in	415 16	715 28
	mm in	0 ÷ 570 0 ÷ 22	0 ÷ 870 0 ÷ 34
With probe insert holder No. 00760057	mm in	0 ÷ 625 0 ÷ 24	0 ÷ 925 0 ÷ 36
With probe insert holder No. S07001622	mm in	0 ÷ 795 0 ÷ 31	0 ÷ 1095 0 ÷ 43
	µm in	< 8 < 0.0003	< 8 < 0.0003
		on flat surfaces: $2\delta = < 3 \mu\text{m} / < 0.00015 \text{ in}$ into bores: $2\delta = < 5 \mu\text{m} / < 0.00020 \text{ in}$	
	kg	15	18

Standard Accessories for TESA-HITE magna 400 / 700

Optional Accessories for TESA-HITE magna 400 / 700

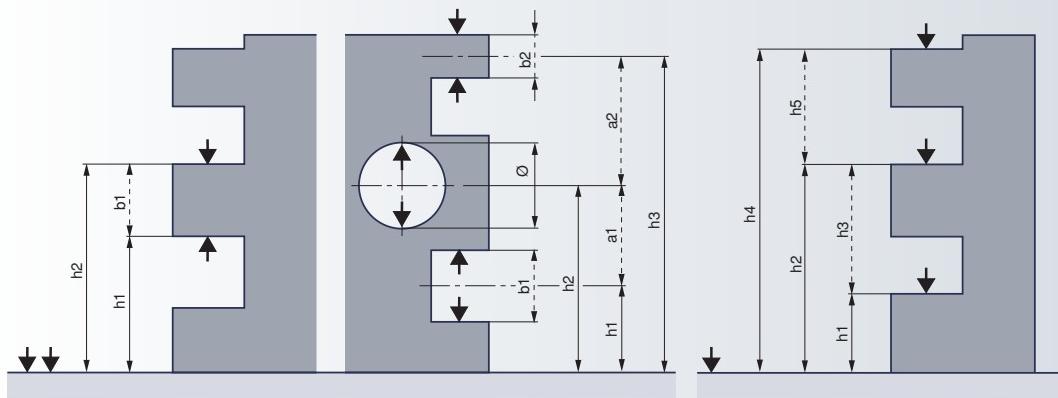


04761052 RS 232 connecting cable for PC and TESA PRINTER SPC

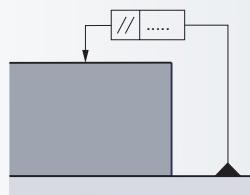
04761063 Connecting cable Sub-D 9pin and USB for PC

Additional accessories: see page N-27

One-Dimensional Measurement



Measurement of Parallelism





83 x 49 mm
LC display.
7-decade plus
minus sign. Also with
graphical symbols for all
active functions.

0,0001/0,001/
0,01 mm or
0,00001/0,0001/
0,001 in



Air-cushion
for easy
displacement
over the surface plate.
Measuring span, application
range and precision:
see table on page N-8.

Nickel plated
gauge base
(chemical coating)
with bottom face including
3 resting points, finely
lapped.

Frontal,
model 400 < 9 µm,
model 700 < 13 µm



Probing head
mounted on a
ball-bearing,
hand wheel for head dis-
placement, fine setting. Head
drive carriage can be locked.

500 mm/s
20 in/s

1,5 ± 0,5 N
(at switch
point)



IP40, electronics
to IP65
(IEC 60529)

TESA-HITE 400 / 700

Precision in motion

The two TESA-HITE 400 and 700 height gauges are fitted with the patented, opto-electronic TESA's measuring system with incremental glass scale. Due to their robust and reliable construction, they are ideally suited for dimensional inspection on the shop floor.

Full autonomy is ensured through battery power. Each model allows height or step dimensions, diameters, centre-to-centre distances, groove width and the like to be accurately measured. Excellent price/performance ratio.

- Wide application range, two sizes available with measuring span of 415 mm / 16 in or 715 mm / 28 in, respectively.
- Integrated air-bearing for easy displacement across the granite plate.
- Electronics totally protected against oil and water splashing, dust particles (IP65).
- Control panel with numerical display to 0,0001 / 0,001 / 0,01 mm or 0,00001 / 0,0001 / 0,001 in.
- Dynamic probing of the workpiece with a constant measuring force.
- Easiness, high reliability when checking bores or shafts using TESA's unique device for automatic detection of the culmination point – patented.
- Acoustic signal to acknowledge value capture, also conveniently programmable.
- Ability to measure any deviation in parallelism.
- Possible use of a digital sensor for determining perpendicularity errors with stated angle of the linear regression line.
- Patented TESA's opto-electronic system. Long-lasting stability of the glass scale for unbroken high accuracy.
- Large LC display with symbols for the measuring functions.
- Zero-setting anywhere within the measuring range.
- PRESET function for entering any given value.
- Metric/inch conversion.
- RS 232 data output.
- SCS calibration certificate provided with each height gauge.



HEIGHT GAUGES

TESA-HITE 400 / 700



00730043 TESA-HITE 400 height gauge

Measuring span 415 mm / 16 in

Application range 0 ÷ 570 mm / 0 ÷ 22 in

00730044 TESA-HITE 700 height gauge

Measuring span 715 mm / 28 in

Application range 0 ÷ 870 mm / 0 ÷ 34 in

Each height gauge is supplied with the following standard accessories:

00760143 1 Standard probe insert holder

00760227 1 Standard probe insert with shank and 5 mm dia. ball tip in tungsten carbide

00760219 1 Master piece for establishing the probe constant, nominal dimension to 6,350 mm / 0.2500 in

00760226 1 Electric pump for creating the air-cushion beneath the gauge base, already mounted

00760157 1 Rechargeable battery, 6 V

04761054 1 Mains adapter, 100 ÷ 240 Vac/50 ÷ 60 Hz

04761055 1 Cable EU for mains adapter

04761056 1 Cable US for mains adapter



See table opposite



EN 61326, Class B
(with disconnected charger)



Shipping
packaging



Identification
number



Declaration
of conformity

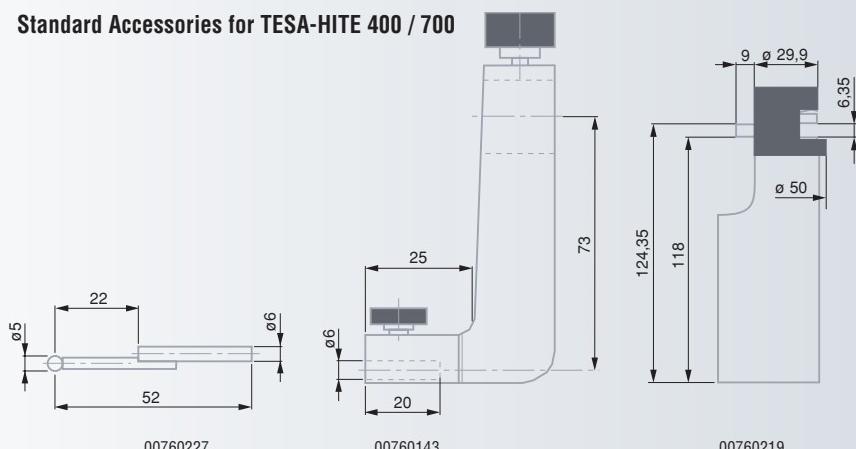


SCS calibration
certificate

Technical data

		TESA-HITE 400	TESA-HITE 700
	mm in	415 16	715 28
	mm in	0 ÷ 570 0 ÷ 22	0 ÷ 870 0 ÷ 34
With probe insert holder No. 00760057	mm in	0 ÷ 625 0 ÷ 24	0 ÷ 925 0 ÷ 36
With probe insert holder No. S07001622	mm in	0 ÷ 795 0 ÷ 31	0 ÷ 1095 0 ÷ 43
	µm in	(2,5+4•L) µm (L in m) (0.0001+0.000004•L) in (L in in)	
		on flat surfaces: 2δ = <2 µm / <0.0001 in into bores: 2δ = <3 µm / <0.00015 in	
	µm in	9 0.00035	13 0.0005
	kg	27	32

Standard Accessories for TESA-HITE 400 / 700



Standard Accessories for TESA-HITE 400 / 700



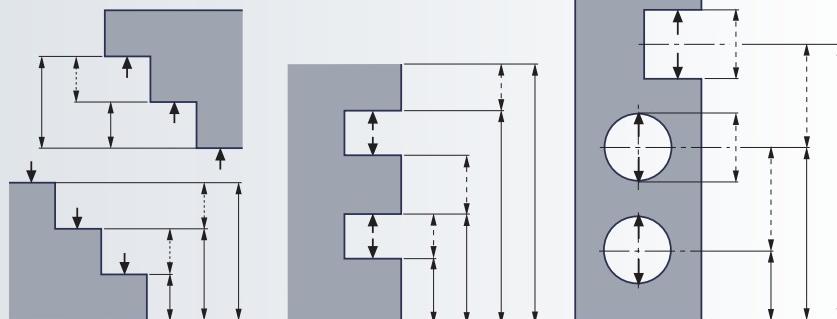
04760070 RS port. Used to connect a digital sensor for perpendicularity measurement

04761052 RS 232 connecting cable for PC and TESA PRINTER SPC

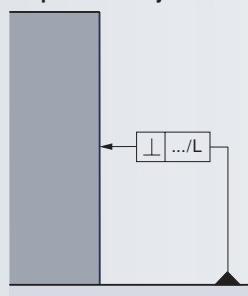
04761063 Connecting cable Sub-D 9pin and USB for PC

Additional accessories: see page N-27

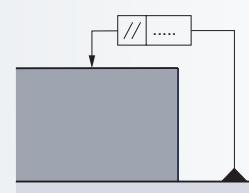
One-Dimensional Measurement



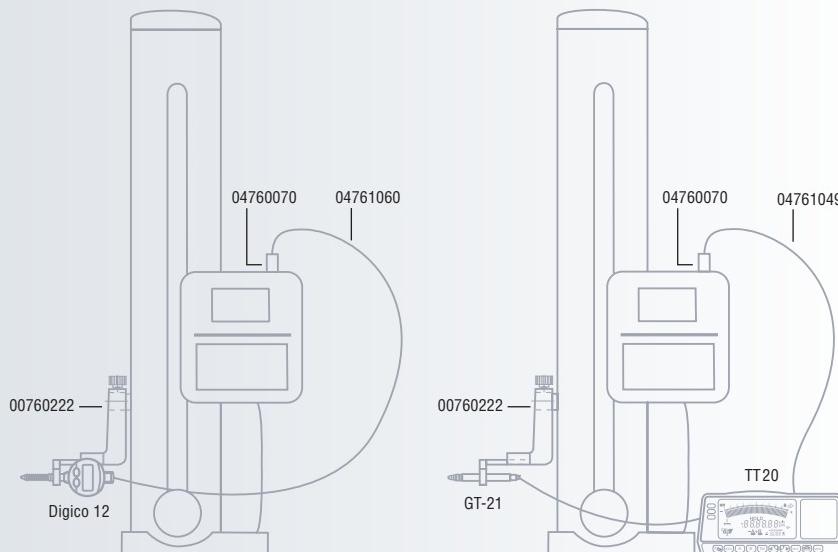
Perpendicularity Measurement



Parallelism Measurement



Configuration for Perpendicularity Measurement



TESA-HITE plus M 400 / 700

Precision in Motion – Motorised Version

The added value of the motorised TESA-HITE plus M 400 / 700 is not only noticeable in their technical features, but also in their ease of use. Combine with the programming function, this solution is ideal for recurrent measurements in the shop floor environment. Advanced functions allow for complex calculations such as those required for two-axis or perpendicularity measurement. These height gauges with outstanding features offer the most attractive price/performance relationship, making them indispensable for the workshop.

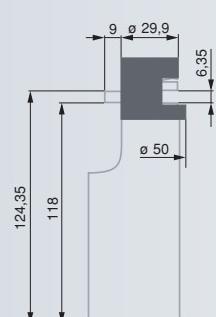
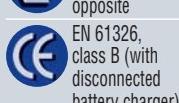
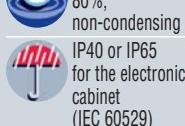
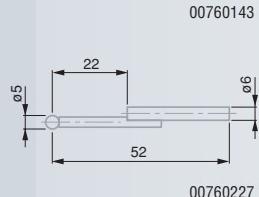
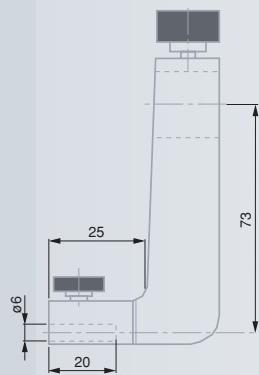


- Wide application range.
- Electronics entirely protected from the penetration of liquids and dust particles.
- Integrated air cushion, mounted control panel.
- Easy, intuitive use of the rotary power control.
- Provide all the measuring functions of a dedicated motorised column, including height, diameter, distance, parallelism, perpendicularity, straightness, angle and 2D measurement besides programming, automatic probing cycles, statistical value processing.
- TESA's patented measuring system, opto-electronic.
- Probe insert holder and inserts compatible with those of TESA MICRO-HITE.
- SCS calibration certificate attached to each height gauge.

- ✓
- Factory standard
- Dual LC display, 128 x 63 mm in size.
 - Upper display field for length values (7 segments/sign). Also with symbols for the functions.
 - Lower full dot display field for perpendicularity and straightness along with symbols for all operator-controlled function keys.
 - 7 segment display plus minus sign for the measured values.
- 0,0001 / 0,001 / 0,01 mm or 0,0001 / 0,0001 / 0,001 in
- Main display with a size to 12,7 x 6,4 mm or 6,3 x 4,2 mm for auxiliary display.
- Metric/inch conversion
- Air bearing for easy displacement on the granite plate.
 - For measuring span, application range and precision: see the table on page N-11.
 - 30 function keys available on the keyboard.
- Rugged nickel plated gauge base having 3 resting points, finely lapped.
- Frontal for models 400 = < 8 µm 700 = < 12 µm
- Incremental glass scale, opto-electronic data capture
- (12 ± 1,5) x 10⁻⁶ K⁻¹
 - Measuring head mounted on a ball-bearing.
 - Electro-motorised head displacement at varying speeds from 7,5 up to 40 mm/s.
 - Manual displacement: ≤ 600 mm/s. Automatic value acquisition with a constant measuring force.
- 1 N. Coupled servomotor for triggering the measuring force.
- RS 232
- Rechargeable batteries, 6V
 - ≈ 60 h, full charging takes 8 hours



**Standard accessories for
TESA-HITE plus M 400 / 700**



00760219

TESA-HITE plus M 400/700



- | | |
|----------|----------------------------------------------------------------------------------------------------------------------------------------|
| 00730045 | TESA-HITE plus M 400 height gauge
Measuring span 405 mm / 16 in
Application range 0 to 560 mm / 0 to 22 in |
| 00730046 | TESA-HITE plus M 700 height gauge
Measuring span 755 mm / 27 in
Application range 0 to 860 mm / 0 to 33 in |
| 00730057 | TESA-HITE plus M 400 height gauge with built-in printer
Same as N° 00730045, but with a built-in matrix printer for results output. |
| 00730058 | TESA-HITE plus M 700 height gauge with built-in printer
Same as N° 00730046, but with a built-in matrix printer for results output. |

Each height gauge is supplied with the following standard accessories:

- | | |
|----------|----------------------------------------------------------------------------------------------|
| 00760143 | 1 Probe insert holder |
| 00760227 | 1 Standard probe insert with shank and 5 mm dia. ball tip in tungsten carbide |
| 00760219 | 1 Master piece for establishing the probe constant, nominal dimension : 6,350 mm / 0.2500 in |
| 00760226 | 1 Electric pump for creating the air cushion under the height gauge base, already mounted |
| 00760157 | 1 Rechargeable battery, 6V |
| 00761054 | 1 Mains adapter, 100 ÷ 240 Vac / 50 ÷ 60 Hz |
| 00761055 | 1 Cable EU for mains adapter |
| 00761056 | 1 Cable US for mains adapter |

Technical Data



TESA-HITE plus M 400 TESA-HITE plus M 700

mm in	405 16	705 27
With standard accessory	mm in	0 ÷ 560 0 ÷ 22
With probe insert holder N° 00760057	mm in	0 ÷ 615 0 ÷ 24
With probe insert holder N° S07001622	mm in	0 ÷ 785 0 ÷ 31
With standard accessory	µm in	(0.0001+0.000003•L) in (L in in)
With standard accessory		on flat surfaces: 2δ = <1 µm / <0.00005 in into bores: 2δ = <2 µm / <0.0001 in
Frontal, mechanical	µm in	8 0.00031
	kg	27
		32

Optional Accessories for TESA-HITE plus M 400 / 700



- | | |
|----------|----------------------------------------------------------------------------|
| 04760070 | RS port. Used to connect a digital sensor for perpendicularity measurement |
| 04761052 | RS 232 connecting cable for PC and TESA PRINTER SPC |
| 04761063 | Connecting cable with Sub-D connector 9-pin – USB type for PC |
| 04765008 | Thermal paper roll, 57 mm wide |

For additional accessories, report to page N-27



TESA MICRO-HITE 350 / 600 / 900

The metrology-based reference for the workshop



Stand-alone design – Made to measure any size in the form of internal, external, height, depth, step and distance dimensions of geometric part features having either a flat, parallel or cylindrical surface.

Automatic capture of the culmination point on bores or shafts – Dynamic probing with memory functions «max.», «min.» plus «max.-min.»

The TESA IG-13 digital probe lets you also measure any deviation from perpendicularity, straightness and parallelism as well as runout errors with result output according to ISO 1101.

- State-of-the-art concept associated with a high-quality design is the fruit of years of experience in the manufacture of electronic height gauges.
- Ideal for dimensional inspection close to the manufacturing cell. No cumbersome cables to clutter up the working area.
- Fast, simple and reliable probing of the workpiece or holes, especially.
- 3 main gauges available with either a 365, 615 or 920 mm measuring span.
- Numerical display to 0,0005, 0,001, 0,01 and 0,1 mm, or equivalent inch units.
- Extremely accurate measuring of deviations from length, straightness and perpendicularity due to the automatic correction of the bias errors through CAA (Computer Aided Accuracy).
- Coefficient of linear expansion identical to steel ($11,5 \times 10^{-6} \text{ K}^{-1}$).



TESA MICRO-HITE 350 / 600 / 900 main gauges



✓



Factory standard



Measuring span, application range and accuracy as stated on page N-14



Rugged nickel plated base with bottom face including 3 resting points finely lapped



Air cushion usable for easy move of the height gauge over the surface plate, if so.



Frontal, model 350 < 7µm, model 600 < 9µm, model 900 < 11µm



Incremental glass scale with reference point, dividing period of 20 µm. Opto-electronic value capture (TESA patent).



$11,5 \times 10^{-6} \text{ K}^{-1}$



Probing head mounted on a ball-bearing and moved by means of both knurled hand wheel and crank. Head drive system can be locked. Fine adjust device can also be additionally mounted (available as an option). Automatic value capture with a constant measuring force. Visual and acoustic signal for acknowledgment



300 mm/s
12 in/s



$1,6 \pm 0,25 \text{ N}$
(at switch point for value capture)



RS 232,
opto-electronic

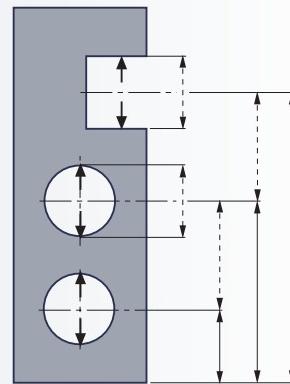
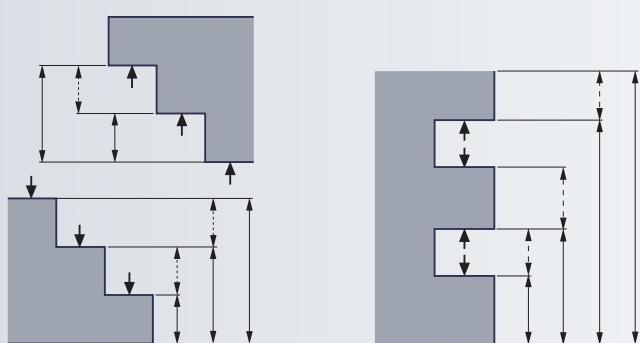
Continued next page

- POWER PANEL for value processing and output with interactive display to guide the operator.
- No manual calculation.
- 99 workpiece oriented measurement cycles, programmable. Each cycle includes a number of 64 features with related limits of size.
- Built-in printer for result output or possible use of an external printer unit to get a hard-copy in A4 format.
- RS 232 data output.
- Every height gauge comes with a SCS calibration certificate.

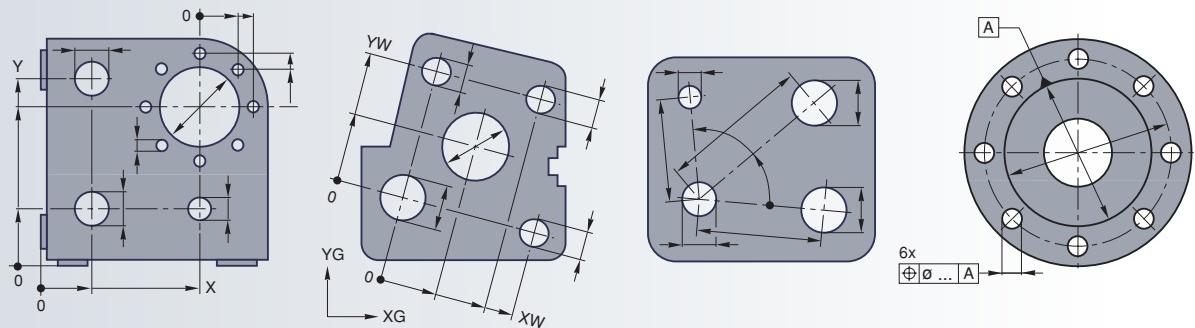
	Rechargeable batteries, 6 V, 3,0 Ah or mains adapter
	~ 12 hours for one battery pack; ~ 2 hours for the pump used to form the air cushion
	10°C to 40°C
	-10°C to 60°C
	80% non-condensing
	IP40 (IEC 60529)
	EN 61326-1, Class B (with disconnected charger)
	Net weight (w/o panel nor battery pack) Main gauges 350: 33 kg 600: 38 kg 900: 45 kg
	Shipping packaging
	Identification number
	SCS calibration certificate

TESA MICRO-HITE – Efficient and Powerful

One-Dimensional Measurement

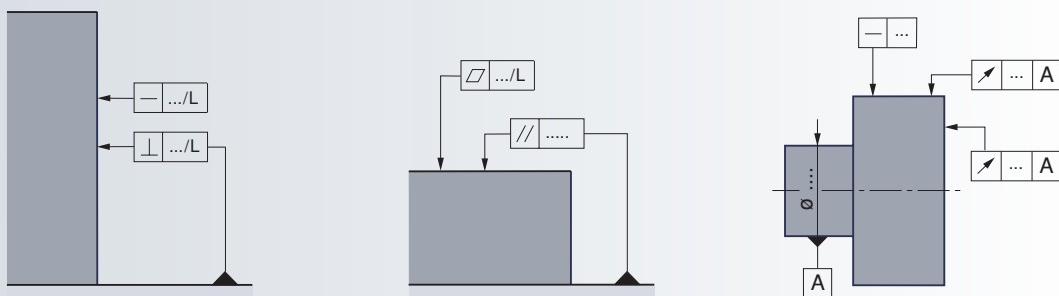


Two-Dimensional Measurement



Programme functions for the detection of form and position errors

with use of a TESA IG-13 digital probe



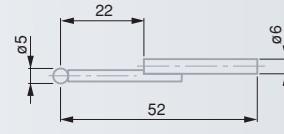
TESA IG-13



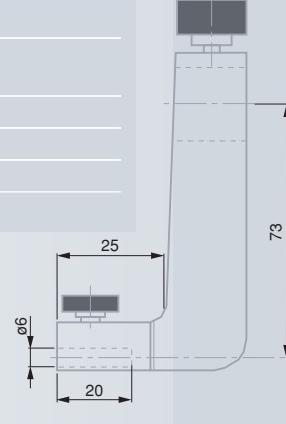
TESA MICRO-HITE 350 / 600 / 900 Height Gauge Sets



Nº			
00730033	TESA MICRO-HITE height gauge set	350	
00730034	TESA MICRO-HITE height gauge set	600	
00730035	TESA MICRO-HITE height gauge set	900	
<i>Each gauge set includes the following components, control panel excluded:</i>			
00730021	1 TESA MICRO-HITE 350 main gauge	●	
00730022	1 TESA MICRO-HITE 600 main gauge	●	
00730023	1 TESA MICRO-HITE 900 main gauge	●	
00760143	1 Standard probe insert holder	●	●
00760227	1 Standard probe insert with shank and 5 mm dia. ball tip in tungsten carbide	●	●
00760150	1 Master piece for establishing the probe constant, nominal dimension 20,0000 mm/0.78740 in	●	●
00760142	1 Electric pump for creating the air-cushion beneath the gauge base, already mounted	●	●
00760141	1 Battery pack	●	●
04761054	1 Mains adapter, 100 to 240 Vac/50 to 60 Hz	●	●
04761055	1 Cable EU for mains adapter	●	●
00760151	1 Dust cover for TESA MICRO-HITE 350	●	
00760152	1 Dust cover for TESA MICRO-HITE 600	●	
00760153	1 Dust cover for TESA MICRO-HITE 900	●	
<i>Optional Accessories for TESA MICRO-HITE 350 / 600 / 900</i>			
00760144	Add-on fine adjust device for extra fine movement of the measuring head, complete		
00760157	Spare battery pack No. 00760141		
04761056	Cable US for mains adapter		
04761023	RS 232 connecting for PC and TESA PRINTER SPC		
For additional accessories, see pages N-20 and N-27.			

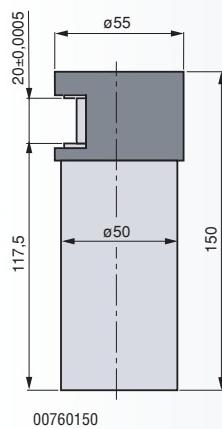


00760227



00760143

Technical Data



00760150

Models	350	600	900	
	mm in	365 14	615 24	920 36
With standard accessory	mm in	0 ÷ 520 0 ÷ 20	0 ÷ 770 0 ÷ 30	0 ÷ 1075 0 ÷ 42
With probe insert holder No. 00760057	mm in	0 ÷ 575 0 ÷ 22	0 ÷ 825 0 ÷ 32	0 ÷ 1130 0 ÷ 44
With probe insert holder No. S07001622	mm in	0 ÷ 745 0 ÷ 29	0 ÷ 995 0 ÷ 39	0 ÷ 1300 0 ÷ 51
With standard accessory	(2 + 3•L) µm (0.0001 + 0.000003•L) in		(L in m) (L in in)	
With standard accessory		2δ = ≤ 1 µm / ≤ 0.00005 in		
Frontal, mechanical	µm in	7 0.00028	9 0.00035	11 0.00043
Frontal and lateral using TESA IG-13	µm in	6 0.00024	8 0.00031	10 0.00039

POWER PANEL



Dual LC display,
128 x 63 mm
in size.

- Upper display field for length values (7-segment/sign). Also with symbols for the functions.
- Lower full dot display field for perpendicularity and straightness along with symbols for all operator-controlled function keys.

7-decade display plus minus sign for the measured values.

12,7 x 6,4 mm main display,
6,3 x 4,2 mm auxiliary display.

See opposite

Metric/Inch conversion

Floating zero

PRESET function for entering a given value.

Continuous displaying.

Manual or automatic triggering of data transfer.

Output of predefined inspection reports with headings in 5 languages plus A4 format using an external printer unit.

Via TESA MICRO-HITE

IP40 (IEC 60529)



Control Panel for TESA MICRO-HITE 350 / 600 / 900



00760163



TESA POWER PANEL

Includes a dedicated programme for measuring in 1 and 2 coordinate directions with geometric combination of the measured values. Lets you measure perpendicularity, straightness and squareness. Provides 99 workpiece oriented measurement cycles including 64 features with related limits of size, programmable. Memory capacity for 2500 measured values. Statistical data processing (SPC). Result output via the built-in matrix printer or in A4 format using an external printer unit.



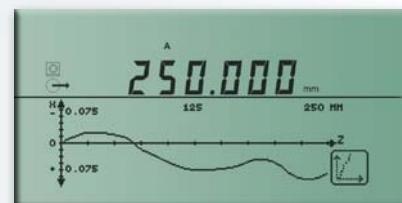
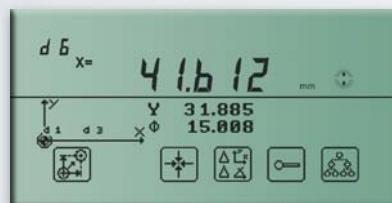
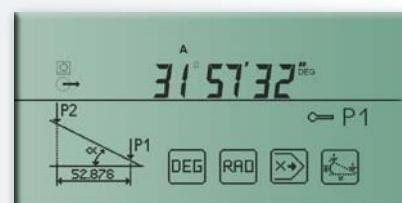
0,0005 / 0,001 / 0,01 / 0,1 mm

0,00002 / 0,0001 / 0,001 / 0,01 / 0,1 in

Accessory for TESA POWER PANEL

04765008

Thermal paper roll, 57 mm wide





TESA MICRO-HITE plus M 350 / 600 / 900

**Speed of the manual vertical column
combined with the precision
of the motorised one**



- Modular design descending from the successful TESA MICRO-HITE dynasty. Also equipped with the unique rotary power control located close to the rugged base. This feature serves for guiding the column that moves on a cushion of air, commanding fast motion of the probe insert and triggering all main measuring functions. Its intuitive use allows accurate, easy handling of the column. A simple rotation causes the measuring head to move rapidly, approach the contact point quickly or slowly, probe upward or downward or execute bore measurement.
- Available in three different sizes with a measuring span of 365, 615 or 920 mm.
- Choice between two control panels for value processing and output.
- Metric and inch LC display with a resolution to 0,0001 and 0,001 mm, or inch equivalent.
- Autonomous run through batteries. No cumbersome cable.
- Built-in air bearing for easy displacement over the surface plate.
- Motorised measuring head for fast, accurate probing at each contact point with a constant measuring force.
- TESA μ system for matchless reliability and simplicity.
- High precision through CAA (Computer Aided Accuracy). All correction values stored in the memory still add to the mechanical precision.
- Coefficient of linear expansion matching that of steel ($11,5 \times 10^{-6} \text{ K}^{-1}$).
- RS 232 data output.
- SCS calibration certificate delivered with every height gauge.

All TESA MICRO-HITE plus M height gauges are unique in that they have exceptional metrological capabilities and can be used intuitively with ease. The revolutionary rotary power control combines the speed of the manual concept with the precision of the motorised one.

With their robust and stand-alone design, these electronic height gauges are optimally suited for use on the shop floor as in the inspection laboratory.

Measure lengths in the form of internal, external, height, depth or distance dimensions of geometrical part features having either a plane, parallel or cylindrical surface, whether in one or two coordinate directions – Determine the position of bores in two coordinate directions with output in both polar and Cartesian (rectangular) coordinates – Mechanically adjusted at our plant based on a patented TESA's method used to verify the correct position of the guiding column against the gauge base. This method allows form and position error to be easily and quickly detected by means of a lever-type dial indicator – Check deviations from straightness or parallelism according to ISO 1101 when used in conjunction with TESA IG-13 linked to the Power panel plus M.

**TESA MICRO-HITE plus M
main height gauges
350 / 600 / 900**



Factory standard



Measuring span,
application range
and accuracy as
stated on page N-18



Rugged nickel
plated gauge
base having
3 resting points, finely
lapped



Built-in air-bearing
for easy move
of the column
over the surface plate



Frontal,
for models
350 < 5 μm
600 < 7 μm
900 < 9 μm



Incremental
glass scale with
datum point,
20 μm grating division.
Opto-electronic data
acquisition (TESA patent).



Measuring head
mounted on a
ball-bearing.
Motorised head displacement
at a varying speed from 7,5
up to 40 mm/s.
Manual displacement:
 $\leq 600 \text{ mm/s}$.
Automatic value capture
with a constant measuring
force.



$11,5 \times 10^{-6} \text{ K}^{-1}$



1 N Coupled
for triggering
the measuring
force

Continued next page

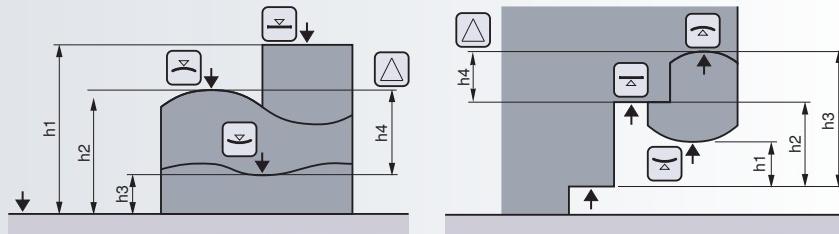
-  Rechargeable batteries 6 V, 3,0 Ah or mains adapter 100 to 240 Vac/50 to 60 Hz
-  ~ 12 hours after full recharging (8 hours)
-  10 °C to 40 °C
-  -10 °C to 60 °C
-  80% non-condensing
-  IP40 (IEC 60529) EN 61326-1, Class B (with disconnected charger)
-  Net weight (w/o control panel nor battery pack) main part 350 = 33 kg, 600 = 38 kg, 900 = 45 kg
-  Shipping packaging
-  Identification number
-  Declaration of conformity
-  SCS SCS calibration certificate

TESA MICRO-HITE plus M

Unrivaled Power, Performances, Ease of use

Measurement without change of the probe direction

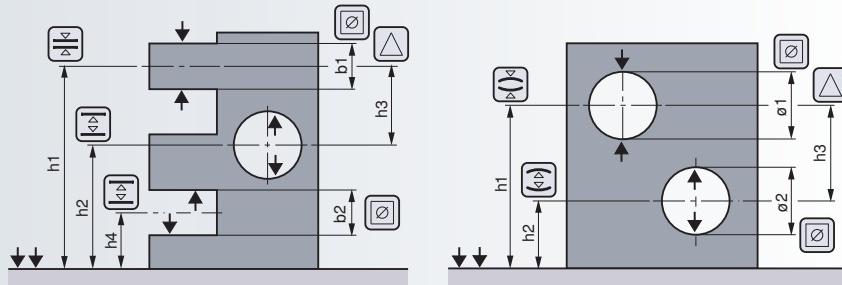
Probe constant excluded



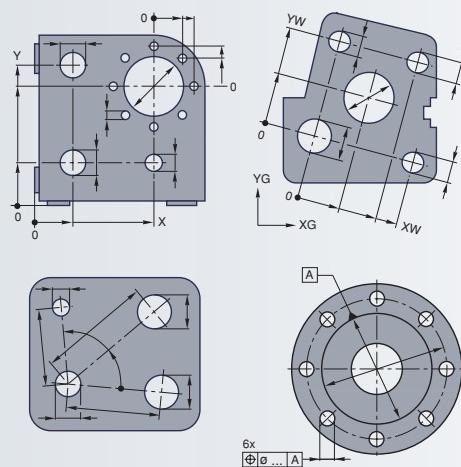
Measurement with change of the probe direction

Probe constant included

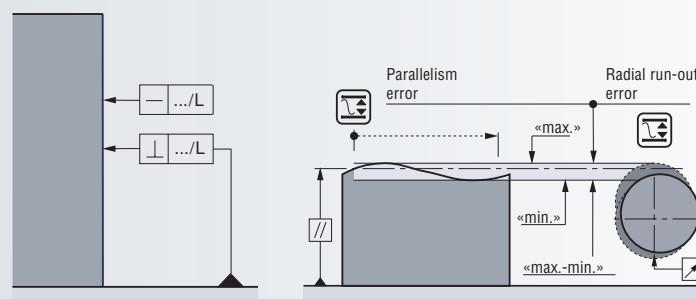
- Disregarding the culmination point
- Considering the culmination point



Two-Dimensional Measurement



Measurement of Form and Position Errors



TESA μ System



using TESASTAT



using TESA IG-13

TESA MICRO-HITE plus M

Height Gauge Sets 350 / 600 / 900



00730063	TESA MICRO-HITE plus M height gauge set	350
00730064	TESA MICRO-HITE plus M height gauge set	600
00730065	TESA MICRO-HITE plus M height gauge set	900

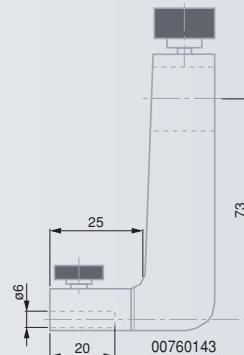
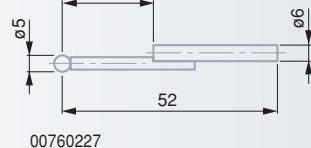
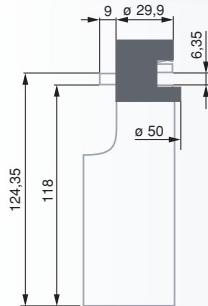
Each gauge set includes the following components, control panel excluded:

00730060	1 TESA MICRO-HITE plus M main gauge	●
00730061	1 TESA MICRO-HITE plus M main gauge	●
00730062	1 TESA MICRO-HITE plus M main gauge	●
00760143	1 Standard probe insert holder	● ● ●
00760227	1 Standard probe insert with shank and 5 mm dia. ball tip in tungsten carbide	● ● ●
00760219	1 Master piece with nominal dimension 6,350 mm/0.2500 in	● ● ●
00760142	1 Electric pump for creating the air cushion beneath the gauge base	● ● ●
00760141	1 Battery pack	● ● ●
04761054	1 Mains adapter, 100 to 240 Vac/50 to 60 Hz	● ● ●
04761055	1 Cable EU for mains adapter	● ● ●
04761056	1 Cable US for mains adapter	● ● ●
00760151	1 Dust cover for Model 350	●
00760152	1 Dust cover for Model 600	●
00760153	1 Dust cover for Model 900	●

Optional Accessories for TESA MICRO-HITE plus M 350 / 600 / 900

00760157	Spare battery for battery pack No. 00760141
-----------------	---------------------------------------------

For additional accessories, report to both pages N-20 and N-27



Technical Data

	Models	350	600	900	
		mm in	365 14	615 24	920 36
	With standard accessory	mm in	0 ÷ 520 0 ÷ 20	0 ÷ 770 0 ÷ 30	0 ÷ 1075 0 ÷ 42
	With probe insert holder No. 00760057	mm in	0 ÷ 575 0 ÷ 22	0 ÷ 825 0 ÷ 32	0 ÷ 1130 0 ÷ 44
	With probe insert holder No. S07001622	mm in	0 ÷ 745 0 ÷ 29	0 ÷ 995 0 ÷ 39	0 ÷ 1300 0 ÷ 51
	With standard accessory		(2 + 1,5•L) µm (0.0001 + 0.0000015•L) in	(L in m) (L in in)	
	With standard accessory		on flat surfaces: $2\delta = \leq 0,5 \mu\text{m} / \leq 0.000025 \text{ in}$ into bores: $2\delta = \leq 1 \mu\text{m} / \leq 0.00005 \text{ in}$		
	Frontal, mechanical Frontal and lateral using TESA IG-13	µm in	5 0.00020	7 0.00028	9 0.00035

POWER PANEL plus M

 LC dual display,
128 x 63 mm
in size.

- Length measurement:
7-segment/digit upper
display field for values plus
symbols for the functions.
- Straightness or perpendicularity measurement:
display field for values plus
symbols (function keys).
Operator controlled operations (full dot display).

Measured values:
7-decade display plus
minus sign.

 12,7 x 6,4 mm
main display,
6,3 x 4,2 or
3,8 x 2,9 mm auxiliary
display

 Keypad with
42 softkeys

 See opposite

 Metric/inch
conversion

 PRESET function
for entering a
given value.

Acoustic signal.

Manual or automatic
triggering of data transfer.

Output of predefined reports
with headings in 5 languages
(plus a programmable one)
using an external printer unit
(A4 format).

 Bidirectional
RS 232, opto-
electronic and
Centronics

 Via
TESA MICRO-HITE
plus M

 IP50
(IEC 60529)



 Declaration
of conformity

Control Panels for TESA MICRO-HITE plus M 350 / 600 / 900



00760221



TESA POWER PANEL plus M

Includes a part programme for one or two-dimensional measurement.

- Captures flatness, parallelism and run-out deviations.
- Measures any deviation in perpendicularity or straightness.
- Executes angle measurement.
- Allows for value input through the keypad and digital value sensor.
- Enables automatic programming of the measurement cycles in Teach-in mode. Up to 9999 features distributed in several part programmes (each including max. 999 values) can be stored in the memory.
- Memory capacity for up to 25 000 measured values.
- Provides SPC capability with output of mean value, range, standard deviation, histogram, comparison nominal value/actual value, number of out-of-tolerance values, control limits, control charts.
- Prints reports in A4 format with related tables and graphics. Creates tailor-made headings to suit Users' needs.



0,0001 / 0,001 / 0,01 mm
0,00001 / 0,0001 / 0,001 in

00760220

**TESA POWER PANEL plus M
with built-in printer**

Identical to item N° 00760221, but with integrated matrix printer for result output.

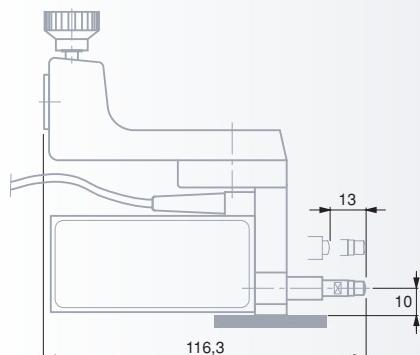
Optional Accessories for TESA Power Panel plus M

04761052	RS 232 connecting cable for PC and TESA PRINTER SPC
04761063	USB connecting cable for PC
04765008	Thermal paper roll, 57 mm wide



**Optional Accessories for
TESA MICRO-HITE 350 / 600 / 900
TESA MICRO-HITE plus M 350 / 600 / 900
equipped with Power Panel plus M**

For additional optional accessories, see on page N-27.



00760140 TESA IG-13 probe set

Consisting of:

00760139 1 TESA IG-13 digital probe



13 mm/0.51 in



1 µm



0,45 N at zero
0,75 N at stop

00760138 1 TESA IG-13 attachment

Accessories:

01960005 Lift lever for the measuring bolt

03540501 10 mm long extension for the probe insert

04761047 Connecting cable IG-13/Power Panel plus M (1 m)

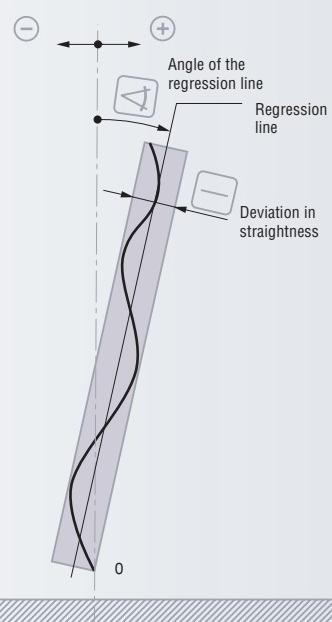
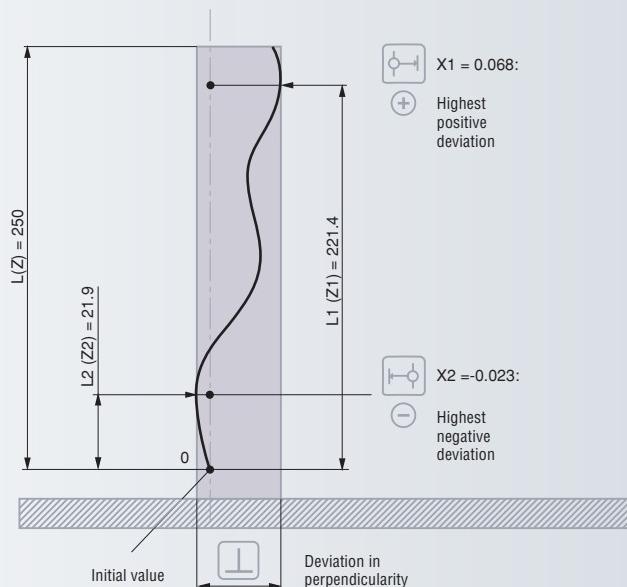
Optional Accessories

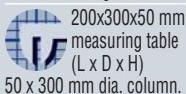
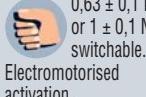
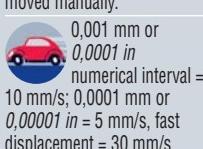


Factory standard

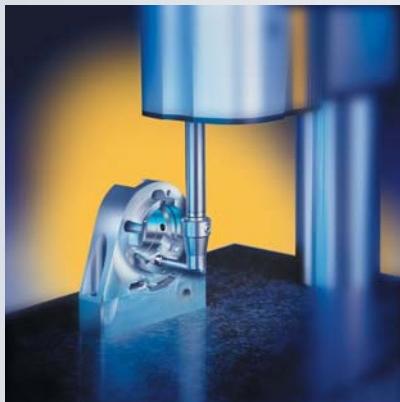


Shipping packaging



**Support****TESA-*μHITE*
value sensor****TESA-*μHITE* Height Gauge**

The solution for the most varied metrology applications



Compact design with measuring stand included
– Sensor equipped with a system for coaxial measuring according to the Abbe principle or using an offset probe relative to the gauge axis.

Measures internal, external, height, depth, step and distance dimensions on geometric elements having either a flat, parallel or cylindrical surface – Automatic detection of the culminating point on bores or shafts – Dynamic probing with memory functions «max.», «min.» and «max.-min.».

The whole system provides the best solution for measuring straightness, flatness and parallelism or inspecting axial and radial runouts depending on the chosen tool configuration.

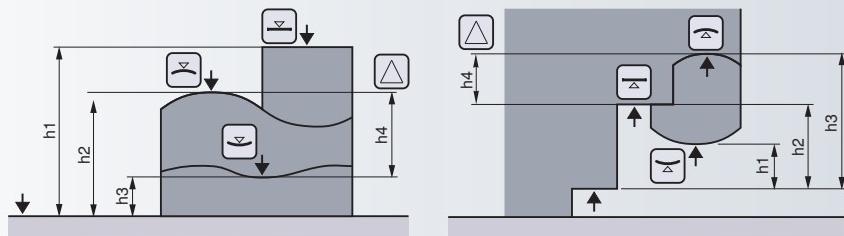
- Ideal for workpiece inspection close to the production area.
- 100 mm measuring span.
- 0,001 mm and 0,0001 mm or 0.0001 in and 0.00001 in scales intervals.
- Max. perm. error as low as 2 µm (or 1 µm when checking coaxiality).
- Integrated temperature sensor so that the coefficient of linear expansion of each gauge unit matches that of steel ($11,5 \times 10^{-6} K^{-1}$).
- Motorised measuring head for fast probing at each point.
- Automatic value capture, controlled over the stability of the measuring force, but also all measured values.
- Constant measuring force through the motor-driven actuator. Switchable.
- No manual calculation needed.
- RS 232 data output with direct connection to TESA PRINTER SPC.
- Memory capacity for 99 single values.



TESA- μ HITE Capabilities

Measurement without change of the probe direction

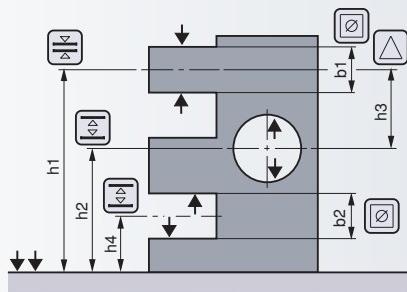
Probe constant excluded



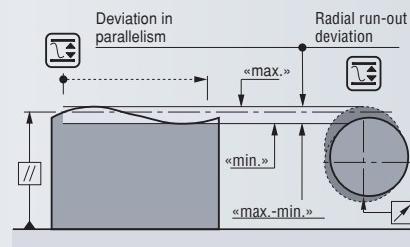
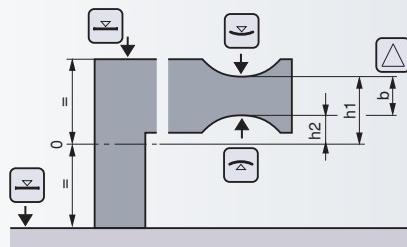
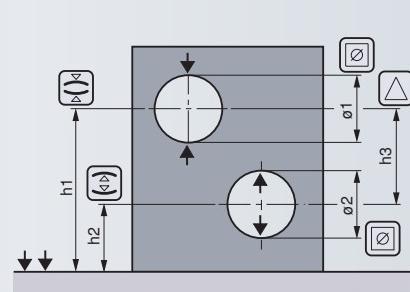
Measurement with change of the probe direction

Probe constant included

- Disregarding the culmination point



- Considering the culmination point



Control Panel

67 x 33 mm LC display.
Alphanumeric display: 3-line display 7segment/ digit plus symbols.
Display for measured values: 7-decade display plus minus sign.
Auxiliary display 1 or 2: 7 or 4 digits.

10 x 4,9 mm (value display), 7,5 x 3,7 or 5 x 2,5 mm (auxiliary display 1 or 2),

Metric/Inch Conversion

Keyboard with 20 softkeys
 PRESET function for entering any given value.
Acoustic signal.
7 languages available for report headings

RS 232,
 opto-electronic and bidirectional
 Mains adapter 100 to 240 Vac / 50 to 60 Hz / 6,6 Vdc / 750 mA (order N° 04761054)

Additional Data

5°C to 40°C

-10°C to 60°C

80% non-condensing

See drawings

16,2 kg net (support N° 00760203).
2,6 kg net (TESA- μ HITE N° 00730050).
1,45 kg net (control panel N° 00760204 with cable N° 00760191)

IP50 (IEC 60529)

EN 61326-1, Class B

Shipping packaging

Identification number

SCS calibration certificate

Declaration of conformity

HEIGHT GAUGES



00730049 TESA-µHITE height gauge

0 ÷ 160

0 ÷ 6.3

Provided with the following components:

00760203 1 TESA measuring support, granite measuring table,
size 200 x 300 x 50 mm

00730054 1 TESA-µHITE electronic length unit

Also included:



mm

in

00730050 1 TESA-µHITE value sensor

100

4

00760204 1 Control panel. To be connected to TESA-µHITE.

0,001
0,0001

0,0001
0,00001

00760191 1 Connecting cable for TESA-µHITE to control panel

00760195 1 Probe insert holder, axial with a M2,5 thread

03510002 1 Probe insert with a 3 mm dia. tungsten carbide ball tip

00760197 1 Probe insert with a 5 mm dia. tungsten carbide ball tip, offset

00760192 1 Master piece for establishing the probe constant, nominal dimension 10 mm/0.39370

04761054 1 Mains adapter, 100 to 240 Vac/50 to 60 Hz

04761055 1 Cable EU for mains adapter

04761056 1 Cable US for mains adapter

038407 1 Suited plastic case

For additional accessories, see page N-26.

Accuracy



μm

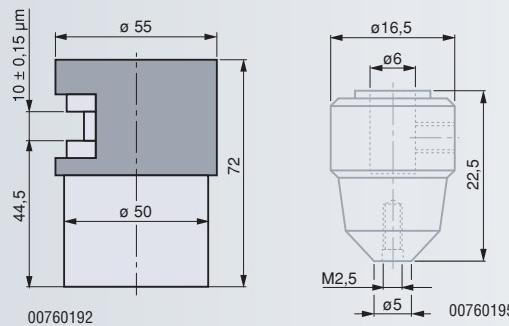


in

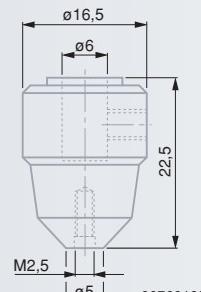
Insert's position
relative to the
axis of the
measuring bolt

coaxial	1,0	0.00005	0,5	0.00002
offset	2,0	0.0001	1,0	0.00004

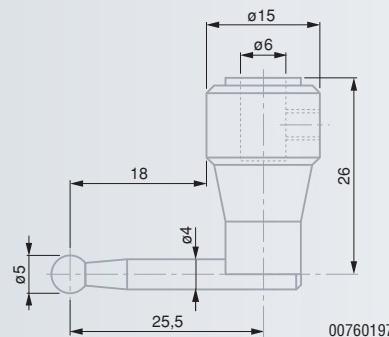
Applicable with used standard accessory.



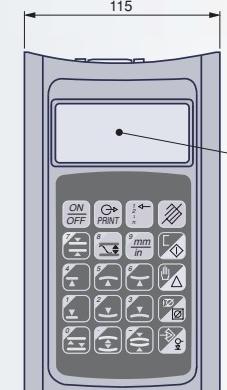
00760192



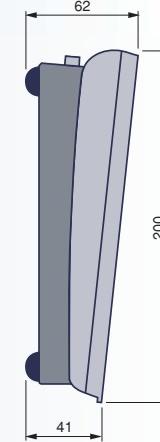
00760195



00760197

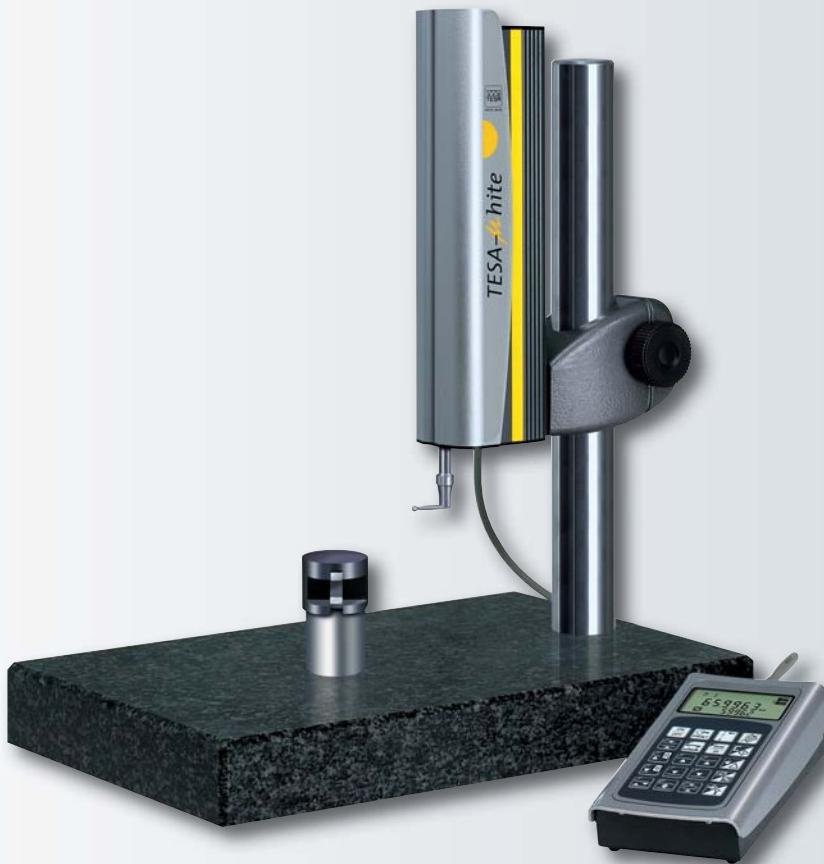


00760204



TESA- μ HITE

Extended application range up to 360 mm



Factory standard



100 mm/4 in



0 to 360 mm
0 to 14.2 in



0,001 mm and
0,0001 mm or
0,0001 in and
0,00001 in



Max. perm.
error G: see
table page N-23



Repeatability
limit r: see
table page N-23

Support



Granite measuring
table; dull-chrome
plated steel column,
hardened and ground.



300x400x50 mm
measuring table
(L x D x H).
50 x 500 mm dia. column.



Finish lapped



33 kg net
(support
N° S07600163)



2,6 kg net
(TESA- μ HITE N° 00730050)
1,45 kg net
(control panel N° 00760204
with cable N° 00760191)



Accuracy grade
00 according to
DIN 876, Part 1



TESA- μ HITE height gauge with extended application range

0 ÷ 360 0 ÷ 14.2

Provided with the following components (must be ordered under 2 positions)

S07600163 1 TESA measuring support, granite measuring table, overall dimensions 300 x 400 x 50 mm. The guiding column has a 50 x 500 mm diameter.

00730054 1 TESA- μ HITE electronic length measuring unit

Also included:



00730050	1	TESA- μ HITE value sensor	100	4
-----------------	---	-------------------------------	-----	---

00760204	1	Control panel, connected to TESA- μ HITE.	0,001	0,0001
-----------------	---	-----------------------------------------------	-------	--------

0,0001 0,00001

00760191	1	Cable for connecting TESA- μ HITE to control panel		
-----------------	---	--------------------------------------------------------	--	--

00760195	1	Probe insert holder, axial with a M2,5 thread		
-----------------	---	-----------------------------------------------	--	--

03510002	1	Probe insert with a 3 mm dia. tungsten carbide ball tip		
-----------------	---	---------------------------------------------------------	--	--

00760197	1	Probe insert with a 5 mm dia. tungsten carbide ball tip, offset		
-----------------	---	-----------------------------------------------------------------	--	--

00760192	1	Master piece for establishing the probe constant, nominal dimension 10 mm/0.39370		
-----------------	---	-----------------------------------------------------------------------------------	--	--

04761054	1	Mains adapter, 100 to 240 Vac/50 to 60 Hz		
-----------------	---	-------------------------------------------	--	--

04761055	1	Cable EU for mains adapter		
-----------------	---	----------------------------	--	--

04761056	1	Cable US for mains adapter		
-----------------	---	----------------------------	--	--

038407	1	Suited plastic case		
---------------	---	---------------------	--	--

Additional accessories, see page N-26.

TESA- μ HITE value sensor



Incremental
glass scale with
opto-electronic
data acquisition.
Grating period: 20 μ m.



11,5 $\times 10^{-6}$ K $^{-1}$



Electro-
motorised
gauge head
displacement; can also
be moved manually.



Numerical interval
to 0,001 mm/
0,0001 in =
10 mm/s; to 0,0001 mm/
0,00001 in = 5 mm/s; fast
displacement = 30 mm/s



6 mm dia. x
10 mm long
attachment for
the probe insert



0,63 \pm 0,1 N
and 1 \pm 0,1 N,
switchable.
Electromotorised
activation.



Via the
control
panel





100 mm/4 in

0 to 160 mm/
0 to 6.3 in0,001 mm and
0,0001 mm or
0,0001 in and
0,00001 inMax. perm.
error G: see
table page N-23Repeatability
limit r: see
table page N-23**Support**Granite measuring
table; dull-chrome
plated steel column,
hardened and ground.200x300x50 mm
measuring table
(L x D x H).
50 x 300 mm dia. column.

Finish lapped

16,2 kg net
(support
N° 00760203)
2,6 kg net (TESA-*μ*Hite
N° 00730050)Accuracy
grade 00 according
to DIN 876, Part 1**TESA-*μ*HITE
value sensor**Incremental
glass scale with
opto-electronic
data acquisition.
Grating period: 20 µm.11,5 x 10⁻⁶ K⁻¹Electro-
motorised
gauge head
displacement; can also be
moved manually.0,001 mm/0,0001
in = 10 mm/s;
to 0,001 mm/
0,00001 in = 5 mm/s; fast
displacement = 30 mm/s6 mm dia. x
10 mm long
attachment for
the measuring insert0,63 ± 0,1 N
and 1 ± 0,1 N,
switchable.
Electromotorised
activation.Via
control panel**TESA-*μ*HITE****Strong, user-friendly with Power Panel plus M**

Capable to operate using all TESA POWER PANEL plus M measuring functions, those for perpendicularity measurement excepted (more details on both pages N-17 and N-19).



mm in

TESA-*μ*HITE height gauge, plus M version

0 ÷ 160 0 ÷ 6.3

Provided with the following components (must be ordered under 3 positions):

00760203 1 **TESA measuring support**, granite table,
200 x 300 x 50 mm
(large-size support No. S07600163 can alternately also be used)

00760221 1 **POWER PANEL plus M**
Related features listed on page N-19
(can alternately also be used with host printer No. 00760220)

S07010288 1 **TESA-*μ*HITE** electronic length measuring unit,
without control panel

Also included:

mm in

00730050 1 **TESA-*μ*HITE value sensor**

100 4

00760191 1 **Cable for connecting TESA-*μ*HITE to control panel**

00760195 1 **Probe insert holder, axial for probe inserts with a M2,5 thread**

03510002 1 **Probe insert with a 3 mm dia. tungsten carbide ball tip**

00760197 1 **Probe insert with a 5 mm dia. tungsten carbide ball tip, offset**

00760192 1 **Master piece for establishing the probe constant,
nominal dimension 10 mm/0.39370**

04761054 1 **Mains adapter 100 to 240 Vac/50 to 60 Hz**

04761055 1 **Cable EU for mains adapter**

04761056 1 **Cable US for mains adapter**

038407 1 **Suited plastic case**

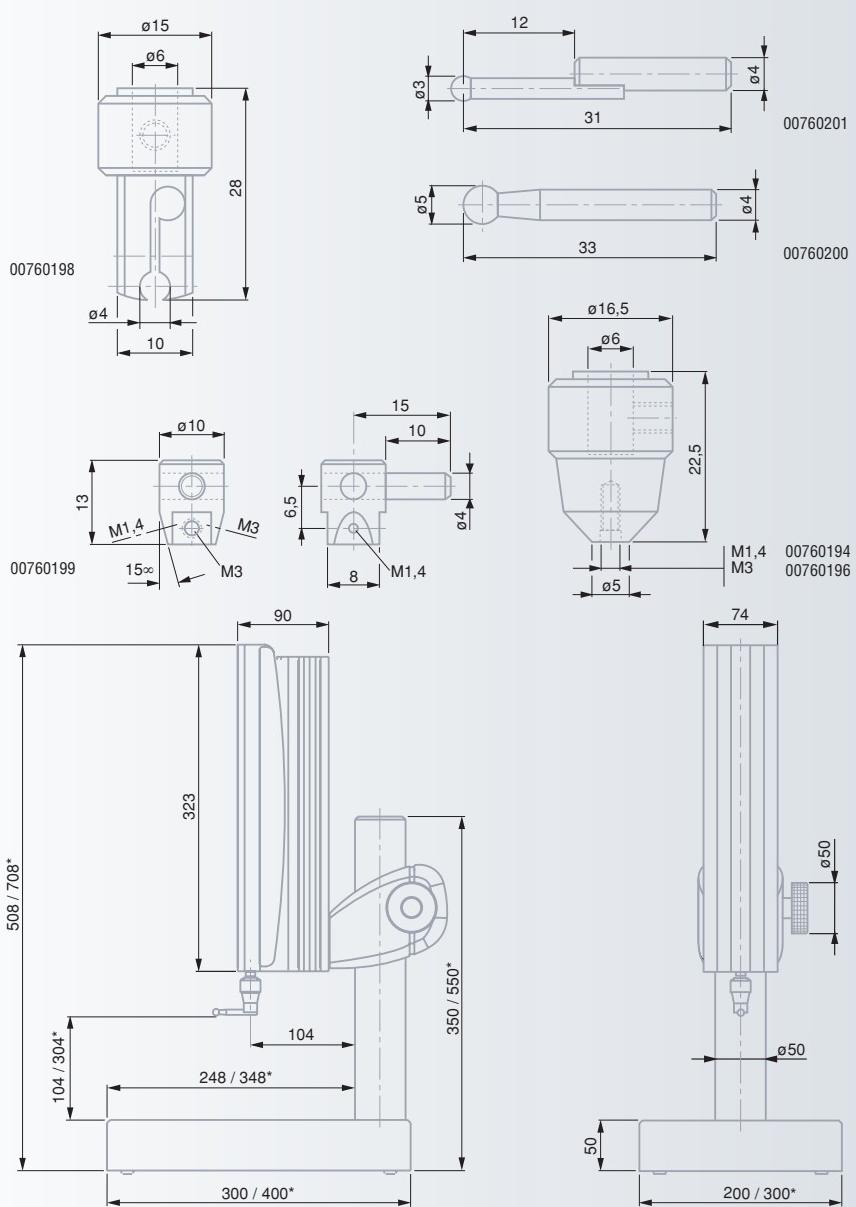
For additional accessories, see page N-26.

For measuring applications, see page N-17.



Optional Accessories


- 00760186** Set of special probe inserts (see page N-29).
- 00760194** Axial probe holder for probe inserts with a M1,4 thread.
- 00760196** Axial probe holder for probe inserts with a M3 thread
- 00760198** Radial probe holder with a 4 mm dia. mounting bore.
- 00760199** Universal probe insert holder with a 4 mm dia. clamping shank (used in conjunction with radial probe holder No. 00760198). M1,4 plus M3 threads (2 x 2) for the probe inserts.
- 00760200** Probe insert with a 5 mm dia. tungsten carbide ball tip. Also with a 4 mm dia. fixing rod for use with radial probe holder No. 00760198.
- 00760201** Probe insert with a 3 mm dia. tungsten carbide ball tip. Also with a 4 mm dia. fixing rod for use with radial probe holder No. 00760198.
- 04768001** Foot switch for triggering data transfer or letting a measuring function be repeated.
- 00760207** Swivel support for control panel
- 00760202** Spare batteries for control panel N° 00760204, 6 Vdc/1,2 Ah.
- 00761052** RS 232 connecting cable for PC and TESA PRINTER SPC
- 00761063** Sub-D connector 9-pin – USB type for PC



✓
Factory standard



Shipping packaging

* With measuring support No. S07600163



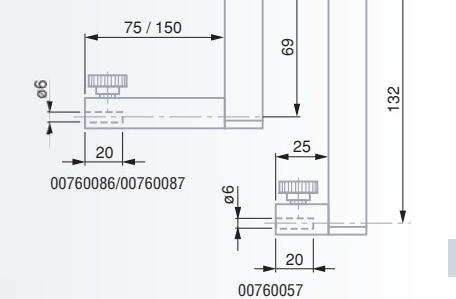
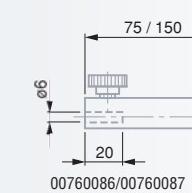
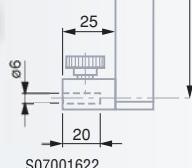
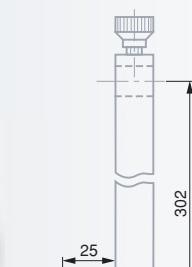
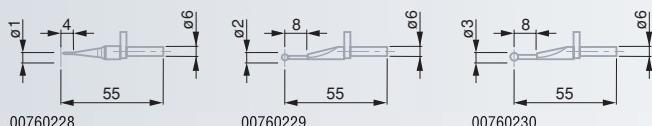
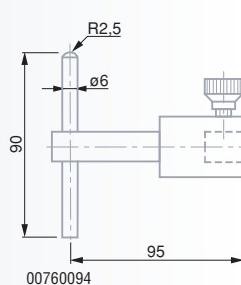
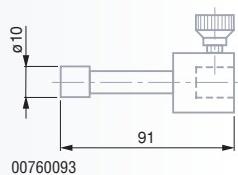
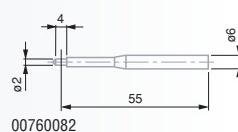
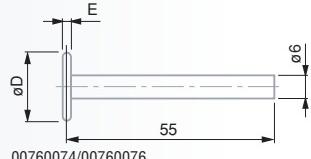
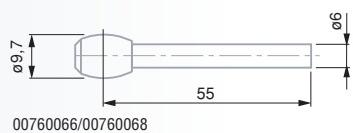
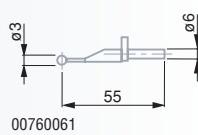
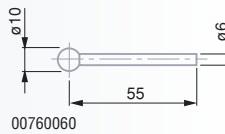
Optional Accessories for
TESA MICRO-HITE plus M 350 / 600 / 900
TESA MICRO-HITE 350 / 600 / 900
TESA-HITE 400 / 700 – TESA-HITE plus M 400 / 700
TESA-HITE magna 400 / 700

No**=**

- 00760173 Partial accessory set
 00760148 Full accessory set

Supplied in a suited plastic case with the following items:

00760061	1 Probe insert with a 3 mm dia. carbide ball tip	●	●
00760060	1 Probe insert with a 3 mm dia. carbide ball tip	●	●
	Probe inserts with carbide, barrel-shaped measuring faces for cylindrical bores as well as for determining the position of metric inside threads (or similar).		
00760066	1 item with a 2,2 mm diameter (for M3 to M16 threads)	●	
00760067	1 item with a 4,5 mm diameter (for M6 to M48 threads)	●	
00760068	1 item with a 9,7 mm diameter for M12 to M150 threads)	●	
	Probe inserts with a carbide disc tip for grooves, slots, centring shoulders etc.		
00760074	1 Item, E = 1 mm / 4,5 mm diameter	●	
00760075	1 Item, E = 2 mm / 14 mm diameter	●	
00760076	1 Item, E = 3 mm / 19 mm diameter	●	
00760082	1 2 mm dia. probe insert with a small cyl. carbide face	●	
00760093	1 Probe insert with a cylindrical, tungsten carbide measuring face (10 mm dia., 12 mm long). Stainless steel body, hardened.	●	●
	Probe insert holder for depth increase		
00760086	1 Item for depth up to 110 mm (L = 75 mm)	●	
00760087	1 Item for depth up to 185 mm (L = 150 mm)	●	
00760057	1 Probe insert holder for extending the application range	●	
00760094	1 Probe insert with a stainless steel shank, hardened. Also with one flat and one spherical carbide measuring face. Interchangeable shank.	●	●
	Probe inserts with shank and ball tip in tungsten carbide		
00760228	1 Item with a 1 mm tip diameter	●	
00760229	1 Item with a 2 mm tip diameter	●	
00760230	1 item with a 3 mm tip diameter	●	
S07001622	Probe insert holder for extending the range of application		




00760096

1 Holder for TESASTAST probe inserts with a M1,4 thread or any other ones with a M2,5 thread.

TESASTAST probe inserts, carbide ball tip, M1,4 thread

01860201

1 Item with a 1 mm probe tip diameter

01860202

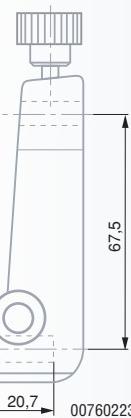
1 Item with a 2 mm probe tip diameter

01860203

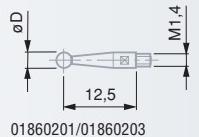
1 Item with a 3 mm probe tip diameter

01860307

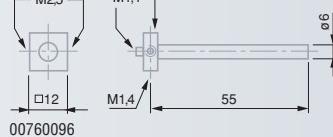
1 Wrench



01860307



01860201/01860203



00760096

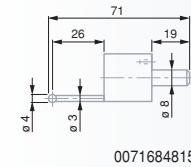
Optional accessories for use with insert holder No. 00760223

00760223

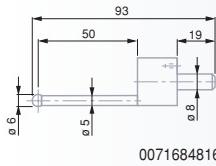
Holder for use with any probe insert listed below

0071684825

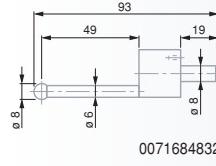
Probe insert with a 6 mm dia. tungsten carbide ball tip



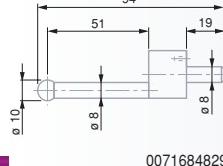
0071684815



0071684816



0071684832



0071684829


0071684815

1 Probe insert with a 4 mm dia. tungsten carbide ball tip

0071684816

1 Probe insert with a 6 mm dia. tungsten carbide ball tip

0071684832

1 Probe insert with a 8 mm dia. tungsten carbide ball tip

0071684829

1 Probe insert with a 10 mm dia. tungsten carbide ball tip

0071684817

1 Long probe insert with a 10 mm dia. tungsten carbide ball tip

0071684826

1 Attachment for interchangeable inserts with M1,4 thread. Supplied with 1 insert No. 01860201 having a 1 mm dia. carbide ball tip.

0071684820

1 Probe insert with cylindrical measuring face in hardened steel, 12 mm diameter, 2 mm long.

0071684827

1 Probe insert with disc-shaped face in hardened steel for blind bores or short centring shoulders, 12 mm in diameter, 3 mm wide.

0071684822

1 Probe insert with cone-shaped measuring face in hardened steel, for diameters from 0,5 up to 5,5 mm.

0071684819

1 Probe insert with cone-shaped measuring face in hardened steel, for diameters from 5 up to 20 mm.

0071684828

1 Attachment for interchangeable inserts with M1,4 thread. Supplied with 2 probe inserts No. 01860202 having a 2 mm dia. carbide ball tip

0071684818

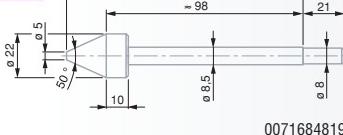
1 Probe insert with a 1 mm dia. steel tip, hardened. Also with adjustable shank for depth measurement.



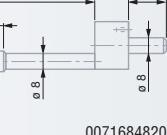
Factory standard



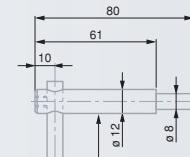
Shipping packaging



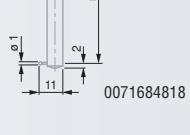
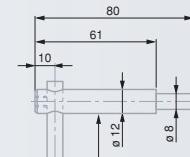
0071684819



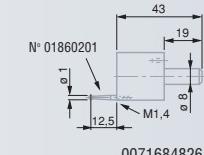
0071684820



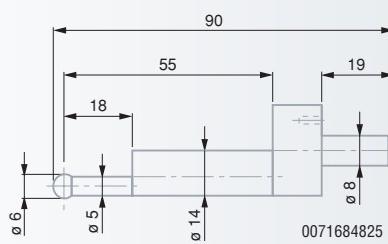
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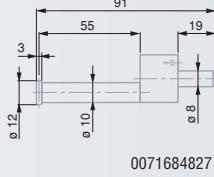
0071684822



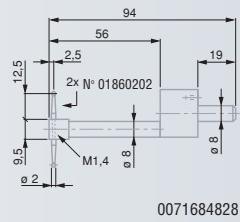
0071684826



0071684825



0071684827



0071684828

Accessories for measuring perpendicularity by means of a dial test indicator

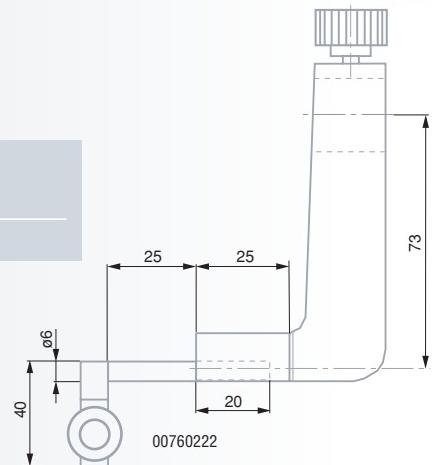
(Used with TESA MICRO-HITE plus M, TESA MICRO-HITE, TESA-HITE 400/700 and TESA-HITE plus M 400/700)



00760222



Probe insert holder for a dial test indicator (lever-type)



Optional Accessories



00760175



Set of probe inserts for TESA-HITE, TESA-HITE plus M, TESA-HITE magna, MICRO-HITE and MICRO-HITE plus M



●

00760186

Set of probe inserts for TESA- μ HITE

●

Provided in a suited plastic case including:

00760177 1 Probe insert holder

●

00760187 1 Probe insert holder

●

00760178 1 Hardened steel rod for grooves, centring shoulders, blind bores etc., angled through 8°

●

●

00760179 1 Tungsten carbide cylindrical rod for depth measurement

●

●

Probe inserts, each with hardened steel ball tip

00760180 1 Item with a 0,9 mm tip diameter

●

00760181 1 Item with a 1,9 mm tip diameter

●

00760182 1 Item with a 2,9 mm diameter

●

00760183 1 Hardened steel probe insert with a cone-shaped measuring face, 8 mm diameter

●

Extensions, 20 mm

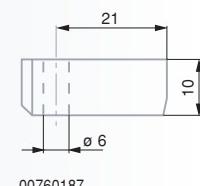
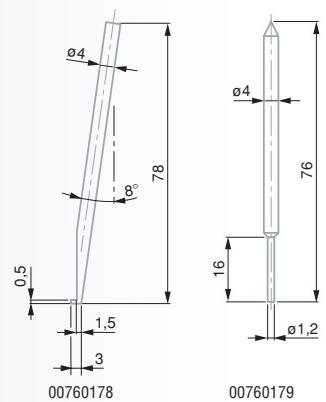
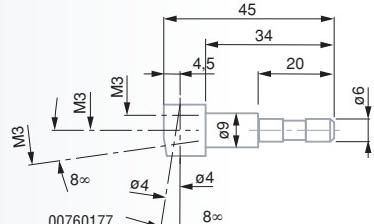
●

00760184 1 Extension with a M3 thread for M3

●

00760185 1 Extension with a M3 thread for M2,5

●

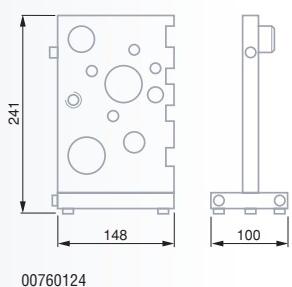


00760124



Practice piece

For one or two-dimensional measurements. Also for measuring straightness, perpendicularity and parallelism errors. Each User's manual POWER PANEL and POWER PANEL plus M includes some examples of programmed measurement cycles.



ETALON Height and Scribing Gauges with Digital Display

Electronic height and scribing gauges

- Resolution to 0,01 mm/0.005 in
- RS 232 interface

	Size	mm	in		Column mm	Base (L x H x W) mm
<i>ETALON height and scribing gauges with digital display</i>						
07739001	300	0 ÷ 300	0 ÷ 12	25 x 6	60 x 40 x 100	
07739002	600	0 ÷ 600	0 ÷ 24	30 x 12	110 x 50 x 160	
07739003	1000	0 ÷ 1000	0 ÷ 40	30 x 12	110 x 50 x 160	



Optional Accessories

		Suitable for models	Length mm
07769001	Scriber	300	65
07769003	Scriber	600, 1000	75
Holder for a dial gauge, axial probe, dial test indicator (lever-type) etc., 8 mm dia. fixing bore.			
07769005	Can be mounted instead of the scriber		
07769006	Rotating and tilting version with a 8 mm dia. shank		



Slider with interchangeable scriber.

Also with back mounted clamping holder having a 8 mm diameter.

Slider with locking screw and fine adjust device.

Base has a ground face with dust grooves.

Top face also ground.



DIN 862
For lengths up to
600 mm = 30 µm
1000 mm = 40 µm

